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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,422	10/31/2001	Daniel G. Schkolnik	5038-147	9698

32231 7590 03/02/2007
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EXAMINER

DINH, DUC Q

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/000,422

Applicant(s)

SCHKOLNIK, DANIEL G.

Examiner

DUC Q. DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (U. S. Patent No. 4,906,843), hereinafter Jones.

In reference to claim 5, Jones shown in Figs. 3-4, an improved optical wheel comprising an circular disc having a plurality of windows (74) arranged adjacent a periphery of the disc, the improvement comprised each of the plurality of windows being characterized by a substantially with moiré pattern effect shape. Jones does not disclose the window being characterized by a substantially the hourglass shape.

However, the claims do not cite "the window being characterized by a substantially hourglass shape" provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Jones because the window of Jones as disclosed in Figs 3 and 5 have an improvement shape for an optical device, i.e.: combination mouse, optical scanner and digitizer puck. In addition, one skill in the optical field would realize the variation in width of the optical window corresponds to a light intensity as Jones suggest in col. 6, lines 41-44 as

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pointed out of the Applicant in page 8 of the Remarks “a beam width of the photoemitter may be large relative to the width of a sector”.

Therefore, it would be obvious to one having ordinary skill in the art to change the shape of the optical window as desired as was judicially recognized with In re Dailey, 149 USPQ 47 (CCPA 1976) which recognizes that CHANGE IN FORM OR SHAPE of well known elements is normally not directed toward patentable object matter.

In reference to claims 6, 11 and 16, Jones discloses the optical window comprising a first pair of opposed sides disposed so that the ends of the opposed sides are spaced farther apart than the centers of the opposed sides in Fig. 3.

In reference to claims 7, 12 and 17 refer to the rejection as applied to claim 5 for the rejection applied for the shape of the window.

In reference to claims 8, 13 and 18, Jones discloses that in the computer mouse, light passes through sectors patterns may be made of alternating opaque and transparent (col. 5, lines 24-27).

In reference to claims 9, 14 and 19 the Jones discloses that each pattern 74 (see Fig. 3 and 5) is elongated to define a long axis being substantially congruent with the radius of the discs as claimed.

In reference to claim 10, refer to the rejection as applied to claim 5 for the shape of the optical window for an optical device. Furthermore, Jones discloses light sources 62 and 64, light detectors 66 and 68, light paths is defined between the light sources and the detectors; light emitted from a light sources 62 and 64 are detected by detectors 66 and 68, a (stroboscopic) discs 59 and 60 are interposed therebetween (claims 10 and 15) such that the light passes through the sectors 74 of the discs (see col. 5, lines 2—39) to create moiré pattern effect.

In reference to claim 15, refer to the rejection as applied to claim 5 for the shape of the optical windows. In addition, Jones discloses in Fig. 3-4, a circular disc (60) having a periphery, a plurality of windows (74) arranged adjacent to the periphery of the disc, (60) each of the plurality of window (70) comprising: a top and a base defining a height; and a first side and second side defining a width as claimed.

In reference to claim 20, Jones discloses an optical device (Fig. 1), comprising:

- a light source (64, 68) configured to emit light;

- a light path defined by an axis intersecting the light source along which an intensity of the light is substantially a maximum (the light path defined by an axis intersecting the light source is substantially maximum with the moiré pattern in Fig. 5c)

- a detector (66 and 68) disposed in the light path;

- and an optical element (encoding wheel Figs. 3a and 3b) between the light source and the detector, the optical element including;

 - a plurality of optical windows (74), each optical window (in Figs. 3 and 4) having:

 - a first side;

 - a second side disposed opposite the first side,

 - the first and second sides shaped such that points on the first side and points on the second side are disposed at varying distances;

 - a minimum distance line defined by a point on the first side and a point on the second side having a substantially minimum distance between each other; and

 - a third side coupling an end of the first side to an end of the second side;

wherein, when the light path intersects one of the optical windows, the minimum distance line of the optical window substantially intersects the light path (see Fig. 5c).

In reference to claim 21, Jones discloses first and second sides of each optical window are shaped such that, when the light path intersects the optical window, an intensity of the light passing through a line between the first and second sides that is substantially perpendicular to a centerline of the optical window is substantially equal to intensities of light passing through other lines between the first and second sides that are substantially perpendicular to the centerline of the optical window; and the centerline of the optical window is disposed between the first side and the second side (Fig. 4 illustrating the light paths of light 62 and 64 intersect the optical windows in Fig. 3a and 3b an intensity of the light passing through a line between the first and second sides that is substantially perpendicular to a centerline of the optical window is substantially equal to intensities of light passing through other lines between the first and second sides that are substantially perpendicular to the centerline of the optical window as shown in Fig. 5c)

In reference to claim 22, Jones discloses the first and second sides of each optical window are shaped such that, when the light path intersects the optical window, an intensity of the light incident on a line across the detector that is substantially perpendicular to a centerline of the detector is substantially equal to intensities of light passing through other lines across the detector that are substantially perpendicular to the centerline of the detector (see rejection of claim 21).

In reference to claim 23, Jones discloses the first and second sides of each optical window are shaped such that when the optical element moves relative to the light path, a light

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intensity measured at the detector versus a position of the optical element has a shape substantially between a sinusoid and a square wave (col. 6, lines 50-63).

In reference to claim 24, refer to the rejection as applied to claim 5 and 10. Furthermore, one skill in the art of optical field would realized the variation in the width of the optical window varies inversely to the light intensity distribution of the light source, i.e. the large the optical window would decrease the distribution of the light intensity of the light source and vice versa.

Response to Arguments

3. Applicant's arguments filed 12/14/06 have been fully considered but they are not persuasive.

With respect to the 112 First paragraph rejection, the Rejection is withdrawn.

With respect to claims 5, 10 and 15 the claims do not cite "the window being characterized by a substantially hourglass shape" provides an advantage, is used for a particular purpose or solves a stated problem or the apparatus use a controller to control the light path or light intensity of the light source to use with the recited optical window. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Jones because the window of Jones as discloses in Figs 3 and 5 have an improvement shape for an optical device, i.e.: combination mouse, optical scanner and digitizer puck. In addition, one skill in the optical field would realize the variation in width of the optical window corresponds to a light intensity as Jones suggests in col. 6, lines 41-44 as pointed out of the Applicant in page 8 of the Remarks "a beam width of the photoemitter may be large relative to the width of a sector".

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Therefore, it would be obvious to one having ordinary skill in the art to change the shape of the optical window as desired as was judicially recognized with In re Dailey, 149 USPQ 47 (CCPA 1976) which recognizes that CHANGE IN FORM OR SHAPE of well known elements is normally not directed toward patentable object matter.

The rejection is, therefore, maintained.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

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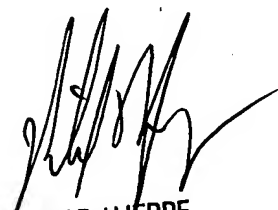
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH
Examiner
Art Unit 2629



DQD
February 27, 2007



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